500 mW, Low I_Z SOD−523 Surface Mount

This series of Zener diodes is packaged in a SOD−523 surface mount package. They are designed to provide voltage regulation protection and are especially attractive in situations where space is at a premium. They are well suited for applications such as cellular phones, hand held portables, and high density PC boards.

Features

- 500 mW Rating on FR−4 or FR−5 Board
- Wide Zener Reverse Voltage Range − 1.8 V to 43 V
- Low Reverse Current (I_{ZT}) − 50 μA
- Package Designed for Optimal Automated Board Assembly
- Small Package Size for High Density Applications
- ESD Rating of Class 3 (Min)
- Total Power Dissipation on FR−5 Board,

SOD−523
CASE 502
STYLE 1

MARKING DIAGRAM

XX = Specific Device Code
M = Date Code*
▪ = Pb−Free Package

(Note: Microdot may be in either location)

*Date Code orientation may vary depending up-
on manufacturing location.

ORDERING INFORMATION

MM5Z4xxxT1G	SOD−523 (Pb−Free)	3,000 / Tape & Reel
SZMM5Z4xxxT1G	SOD−523 (Pb−Free)	3,000 / Tape & Reel
MM5Z4xxxT5G	SOD−523 (Pb−Free)	8,000 / Tape & Reel
SZMM5Z4xxxT5G	SOD−523 (Pb−Free)	8,000 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

(Note 1) @ T_L = 75°C Derated above 75°C	P_D	500 4.0	mW mW/°C
Thermal Resistance, (Note 2) Junction−to−Ambient	$R_{\theta JA}$	250	°C/W
Junction and Storage Temperature Range	T_J, T_{stg}	−55 to +150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted, V_F = 0.9 V Max. @ I_F = 10 mA)

Symbol	Parameter
V	

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted, V_F = 0.9 V Max. @ I_F = 10 mA)

Device*	Device Marking	Zener Voltage (Note 3)				Leakage Current
		V_Z (Volts)			@ I_{ZT}	I_R @ V_R
		Min	Nom	Max	μA	μA

TYPICAL CHARACTERISTICS

TYPICAL CHARACTERISTICS

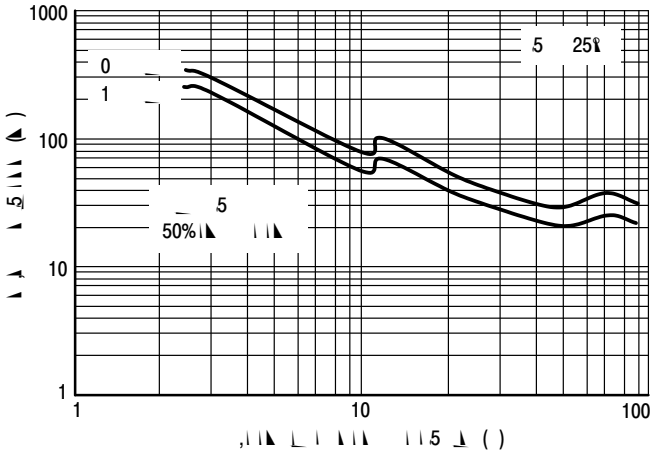
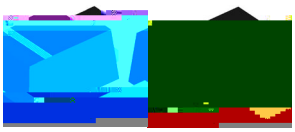
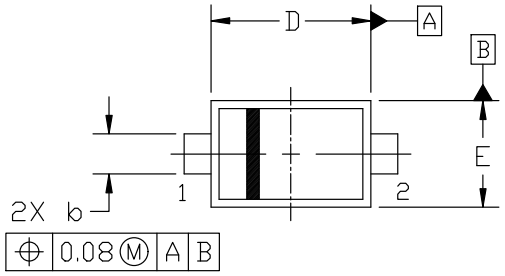


Figure 6. Typical Capacitance

CASE 502
ISSUE F

DATE 08 FEB 2024

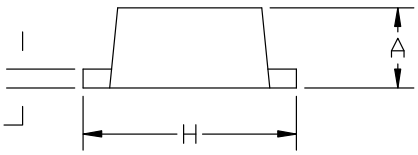


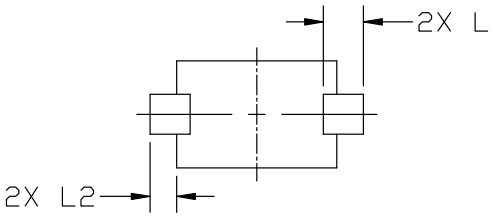


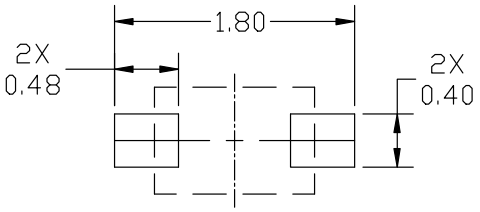
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH, MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

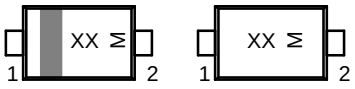
	MILLIMETERS	
DIM	MIN.	NOM.

0.5VSIONING60AND TOLERANCING PER ASME Y14.5M, 2









STYLE 1 STYLE 2

XX = Specific Device Code
M Date Code

*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G” or microdot “▪”, may or may not be present. Some products may not follow the Generic Marking.

STYLE 1:
PIN 1. CATHODE (POLARITY BAND)
2. ANODE

STYLE 2:
NO POLARITY

*For additional informor

ing and Mounting Techniques
Reference manual, SOLDERRM/D.